#### **DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 99.28

# WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-020543 Address: 333 Burma Road **Date Inspected:** 12-Feb-2011

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Zhenhua Port Machinery Company, Ltd (ZPMC) Contractor: **Location:** Shanghai, China

**CWI Name:** Shao Jian Yuan and Li Yan Hua CWI Present: Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No

N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No

Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component: OBG** Trial Assembly

#### **Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly and Bay # 14.

**OBG Trial Assembly: Segment 12AE** 

This QA Inspector performed Dimension Control Inspection for the Segment 12AE.

The Floor Beam (FB) flatness were verified and measured from East and West side of the FB at Panel Points (PP) 110. The QA Inspector measured the flatness using 1500mm Straight Edge at the following locations.

Counter Weight side: At locations A, B, C, D, E, F, G, H and I. Cross Beam side: At locations A', B', C', D', E', F', G', H' and I'.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Bay # 14: Segment 14 East

# WELDING INSPECTION REPORT

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This QA Inspector observed the in-process welding by Flux Cored Arc Welding (FCAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as Seg3019BB-157. The welder identification was 066763 and observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-2233-ESAB. The piece mark was identified as the weld connecting the Vertical Shear Plate sub assembly identified as SA3364 to Anchorage Plate AP3031A.

Please reference the pictures attached for more comprehensive details.

Bay # 14: Segment 14 East

This QA Inspector observed the in-process welding by Flux Cored Arc Welding (FCAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as Seg3019BB-069. The welder identification was 067877 and observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-2233-ESAB. The piece mark was identified as the weld connecting the Vertical Shear Plate sub assembly identified as SA3360 to Anchorage Plate AP3031A.

Bay # 14: Segment 14 East

This QA Inspector observed the in-process welding by Flux Cored Arc Welding (FCAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as Seg3019U-002. The welder identification was 067079 and observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-2233-ESAB. The piece mark was identified as the weld connecting the Anchorage Plate AP3031A to the Longitudinal Diaphragm at work point E3.

Please reference the pictures attached for more comprehensive details.

Bay # 14: Segment 14 East

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as Seg3019BB-169. The welder identification was 044722 and observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-345-SMAW-2G(2F)-FCM-Repair-1. The piece mark was identified as the weld connecting the Vertical Shear Plate Sub Assembly to Bottom Panel. ZPMC performed repair welding in accordance with Critical Welding Report B-CWR2737.

Please reference the pictures attached for more comprehensive details.

Bay # 14: Segment 13BE

This QA Inspector observed the in-process welding by Submerged Arc Welding (SAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as Seg3009-001. The welder identification was 215993 and observed welding in the 1G (Flat) position using approved Welding Procedure Specification WPS-B-T-223(2)1T-1. The piece mark was identified as the weld connecting the Deck Panel to Deck Panel.

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Please reference the pictures attached for more comprehensive details.

#### Bay # 14: Segment 14 West

This QA Inspector observed the in-process welding by Flux Cored Arc Welding (FCAW) process on a Fillet weld. The Weld joint was designated as Seg3175-001-400. The welder identification was 048433 and observed welding in the 3F (Vertical) position using approved Welding Procedure Specification WPS-B-T-2133-ESAB. The piece mark was identified as the weld connecting the Deck Panel to the Diaphargm.

#### Bay # 14: Segment 14 West

This QA Inspector observed the in-process welding by Flux Cored Arc Welding (FCAW) process on a Fillet weld. The Weld joint was designated as Seg3176-001-333. The welder identification was 203781 and observed welding in the 3F (Vertical) position using approved Welding Procedure Specification WPS-B-T-2133-ESAB. The piece mark was identified as the weld connecting the Deck Panel to the Diaphargm.

#### Bay # 14 - Segment 13CW

This QA Inspector observed the in-process welding by Flux Cored Arc Welding (FCAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as Seg3015B-005. The welder identification was 201583 and observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-B-T-2232-ESAB. The piece mark was identified as the weld connecting the Deck Panel Diaphragm to Floor Beam.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.





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# **Summary of Conversations:**

No relevant conversations were reported on this date.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Math, Manjunath	Quality Assurance Inspector
Reviewed By:	Dsouza, Christopher	QA Reviewer